REMARKS

Claims 1-28 remain for prosecution in the present application.

Claims 1-23 have been rejected under 35 USC 112 and over the prior art. Favorable consideration of all claims 1-28 pending in the application is respectfully requested in view of the following remarks.

Clerical corrections have been made in dependent claims 8-11, 16-17 and 22 for consistency with the unamended recitations of "combined liner and nozzle" in the independent claims. These amendments are for consistency of claim language only.

Claim Rejections - 35 USC 112

Claims 13-23

Claims 13-23 have been rejected under 35 USC 112, first paragraph as allegedly containing subject matter not described in the specification (page 2, paragraph 1 of the Office Action), and as allegedly being not commensurate in scope with the specification (page 2, paragraph 2 of the Office Action). Both bases for rejection apparently center around the recitation of claim 13 of "molding a charge of molten plastic to form a plastic closure," as compared for example with the recitation of claim 1 of "compression molding a charge of molten plastic to form a plastic closure." Although it is certainly true that the application text describes compression molding the plastic closure shell as the preferred implementation of the disclosure, there is nothing in the application text that expressly limits the scope of the disclosure to compression molding the closure shell. Furthermore, it is well known in the art that, as a general proposition, plastic closure shells can be made by either compression molding or injection molding. See, for example,

Morton 5,285,913 cited by the Examiner, particularly column 3, lines 19-21. It also is noted that claim 13 does not recite injection molding the plastic closure, but merely is not expressly limited to compression molding.

Turning to the specific statements of rejection, the phrase "molding a charge of molten plastic to form a plastic closure" is fully supported throughout the application text. See, for example, page 1, line 18, page 4, line 3 and page 4, line 23. The preferred compression molding technique discussed in the application text is a species of molding, and therefore necessarily supports the broader term "molding." The Examiner suggests that the present disclosure is "directed only to compression molding" the closure shell. However, the Examiner cites no express limitation to compression molding, and indeed there is no such express limitation in the application text.

The Examiner further asserts that the phraseology in claim 13 is not "commensurate in scope" with the disclosure. The Examiner cites no portion of the application text that expressly limits the "scope" of the disclosure to compression molding, and indeed there is not such portion to cite. As noted above, the art cited by the Examiner teaches that closure shells, as a general proposition, can be made by injection or compression molding. There is nothing in the present disclosure that necessarily limits the disclosure to compression molding.

New Claim 24

Finally, on this point, it is noted that new claim 24 recites "forming a plastic closure..." This phraseology is supported by the disclosure of the application text inasmuch as the preferred example of compression molding constitutes "forming," and there is

nothing in the application text that expressly limits the scope of the disclosure to compression molding.

Claims 2-7

Claims 2-7 are rejected under 35 USC 112, second paragraph on the basis that claim 2 allegedly is in conflict with claim 1. Claim 1 has been amended by deleting the words "during the compression molding operation" to remove any perceived conflict. Thus, claim 1 recites forming an opening in the base wall of the plastic closure, while claim 2 elaborates upon this forming step.

Claim Rejections - Prior Art

Independent Claim 1 and Dependent Claims 2-12

Amended independent claim 1 is directed to a method of making a dispensing closure comprising compression molding a charge of molten plastic to form a plastic closure having a base wall and a peripheral skirt with internal means for securement to a container, and forming an opening in the base wall of a closure. A combined liner and nozzle is compression molded on the plastic closure on an underside of the base wall within the skirt. Attention is directed in particular to the phrase "combined liner and nozzle," which appears in all independent claims 1, 13 and 24. As would readily be understood by persons of ordinary skill in the packaging art, a "liner" is an element on a closure that provides "a sealing surface against the finish of a container" when the closure is applied to the container. See, for example, the *Good Practices Manual*, Plastic Bottle Institute, page 35 (copy enclosed).

The Examiner has rejected claims 1 and 8-12 over Hins 5,743,443 combined with Morton 5,285,913. Hins discloses a method of making a slit valve 1 that comprises

a diaphragm part 2 and a base part 3. The base part 3 and the diaphragm part 2 are sequentially molded in a two-component injection molding operation that is described in detail at column 3, lines 23-63, particularly lines 40-51. The center part 33 of the mold illustrated in FIG. 3 is initially set at a forward position A to form a mold cavity 32 for injecting the base part. The mold part 33 is then retracted to position B to form a second cavity 34 for injecting the diaphragm part. This is a very specific multi-component injection molding operation that has absolutely no counterpart in compression molding. That is, there simply is no compression molding operation that is analogous to a two-component injection molding operation.

The Examiner suggests that "the slit valve of Hins constitutes a closure." No citation of authority is provided to support this assertion. In point of fact, the slit valve disclosed in Hins is not a "closure" as that term is understood in the art. To elaborate on this point, applicant has amended claim 1 (and claim 13, and drafted claim 24) to recite that the closure peripheral skirt has internal means for securement to a container. The base part 3 in Hins has no such internal means, and indeed would not have such internal means inasmuch as the base part is part of a slit valve and does not form a closure.

The Examiner cites Morton to support the proposition that plastic closures can be molded by either compression molding or injection molding. As noted above, this is certainly correct as a general proposition with regard to closure shells. However, this does not support the broad proposition asserted by the Examiner that "compression molding and injection molding [are] art substitutable alternatives" for all purposes. As noted above, Hins discloses a very specific type of injection molding operation, namely a two-component injection molding operation in which the two components of the slit valve

are sequentially injected during a single mold cycle. There is no comparable compression molding operation. Stated differently, there is no way to revise or adapt the disclosure of Hins to compression molding without venturing into the realm of non-obvious invention.

Claim 1 has been amended (as has claim 13, and new claim 24 has been drafted) to recite that the "combined liner and nozzle" is compression molded on an underside of the closure base wall within the skirt. The recited "combined liner and nozzle" thus is positioned to function as a "liner" for sealing engagement with a container finish. The diaphragm part 2 in Hins is injection molded onto the upper surface of the base part 3, and thus is not and cannot function as a "liner" as that term is understood in the art.

Claims 2-7 are not rejected over the prior art.

Claims 8-12 are allowable both by reason of dependency from claim 1, which is itself allowable for reasons set forth above, and because of the additional novel limitations set forth therein. For example, claim 10 recites that the "combined liner and nozzle" of claim 1 is formed with a nozzle portion extending through the opening in the closure base wall. The diaphragm part 2 in Hins is not, and is not suggestive of, a "combined liner and nozzle" in that the diaphragm part cannot function as a "liner." Furthermore, the diaphragm part in Hins does not have a portion that extends "through" an opening in the base part.

Independent Claim 13 and Dependent Claims 14-23

Amended independent claim 13 is directed to a method of making a closure comprising molding a charge of molten plastic to form a plastic closure having a base wall and a peripheral skirt with internal means for securement to a container, and forming an

opening in the base wall of the plastic closure. A "combined liner and nozzle" is compression molded on the closure on an underside of the base wall within the skirt.

Claims 13 and 22-23 have been rejected over Hins combined with Morton. It appears that the prior art rejection of claim 13 is essentially a verbatim repetition of the prior art rejection of claim 1, so all of the discussion above relative to patentability of claim 1 over the combination of Hins and Morton applies equally as well to claim 13.

Claims 22-23 are allowable both by reason of dependency from claim 13, which is itself allowable for reasons set forth above, and because of the additional novel limitations set forth therein.

Independent Claim 24 and Dependent Claims 25-28

New independent claim 24 is directed to a method of making a closure, which comprises forming a plastic closure having a base wall, a peripheral skirt with internal means for securement to a container, and an opening in the base wall of the plastic closure. A "combined liner and nozzle" is compression molded onto the underside of the closure base wall within the skirt. The molding is such that an annular liner portion is on the underside of the base wall, thus being positioned for sealingly engaging a container when the closure is secured to the container. A nozzle portion is within the opening in the base wall. Thus, new claim 24 is allowable over Hins and Morton for all of the reasons set forth above with respect to claims 1 and 13.

New dependent claim 25 recites that the nozzle portion of the combined nozzle and liner extends through the opening in the closure, which is contrary to Hins.

New dependent claims 26 and 27 are directed to details of forming a compression mold cavity in cooperation with the closure shell, and are not suggested in

the prior art. New dependent claim 28 specifically recites that the closure is formed by compression molding, which is directly contrary to the disclosure of the Hins reference.

It therefore is believed and respectfully submitted that all claims 1-28 remaining in the application are allowable at this time, and favorable action is respectfully solicited.

Please charge any fees associated with this submission to Account No. 15-0875 (Owens-Illinois).

Respectfully submitted,

REISING, ETHINGTON, BARNES, KISSELLE, P.C.

By _____

Robert C. Collins
Reg. No. 27,430
Telephone (248) 689-3500
Facsimile (248) 689-4071

GOOD PRACTICES MANUAL

For Packaging in Plastic Bottles

with

GLOSSARY

of Plastic Bottle Terminology

PLASTIC BOTTLE INSTITUTE

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200

A Division of The Society of the Plastics Industry, Inc.

PLASTIC BOTTLE INSTITUTE
The Society of the Plastics Industry, Inc.
1275 K Street, N.W., Suite 400, Washington, D.C. 20005

allel to centerline intersects the bead (for example, SP-410 and SP-415 finishes).

"L" Style Thread — A type of thread contour (cross section) roughly trapezoidal in outline. The outermost part is radiused. This is a "general purpose" thread contour designed for use with either metal or plastic closures.

L/D Ratio (Length to Diameter Ratio) — A term frequently used to define an extrusion screw which denotes the ratio of the screw length to the screw diameter.

LDPE — Low Density Polyethylene.

Label Panel — That portion of the body of a bottle to which labels are affixed or decoration imprinted.

Land — See "Sealing Surface."

Lead — See "Pitch."

Light Resistance — The ability of a plastic material to withstand exposure to light (usually sunlight or the ultraviolet part of the light spectrum) without change of color or loss of physical and/or chemical properties.

Light Stability — (1) A measure of the ability of a pigment, dye, or other colorant to retain its original color and physical properties either alone or when incorporated into plastics, paints, inks and other colored films or surfaces, upon exposure to sun or other light. (2) Ability of a plastic to withstand the deteriorating effect of exposure to sun or other light dependently or of the stability of any pigmentation it contains.

Linear Molecule — A long chain molecule of two-dimensional structure which may contain side chains or branches. In effect, structural units connected to one another in a linear sequence.

Liner — A disc of paper, cork, composition, etc., retained in a closure to provide a sealing surface against the finish of a container.

Lip — The extreme outer edge of the top of a bottle intended to facilitate pouring.

Lubricants — Prevent materials sticking or improve processibility.

Lug — (1) A type of thread configuration, usually thread segments disposed equidistantly around a bottle neck (finish). The matching closure has matching portions that engage each of the thread segments. (2) A small indentation or raised portion on the surface of a bottle, provided as a means of indexing the bottle for operations such as multi-pass decoration or labeling.

"M" Style Thread — A type of buttress thread contour (cross section) for use with plastic closures. The profile of the thread is roughly a right triangle. One of the two legs that form the right angle is part of the vertical wall of the neck (finish); the other is the horizontal bearing surface, against which the closure threads engage.

Mandrel — (1) In blow molding, part of the tooling that forms the inside of the parison. (2) In extrusion, the solid, cylindrical part of the die that forms tubing or pipe.

Manifold — A term used mainly with reference to blow molding and injection-molding equipment. It refers to the distribution or piping system which takes the single channel flow output of the extruder or injection cylinder and divides it to feed several blow molding heads or injection nozzles.

Mar Resistance — Ability to retain a satisfactory surface appearance when subjected to rubbing, scuffing, scratching, etc.

Material Distribution — A term which describes the variation in thickness of various parts of the bottle; i.e., body, wall, shoulder, heel, base, etc. Material distribution is controlled by parison programming, temperature of the melted plastic, bottle geometry, blow up ratio, etc.

Melt Flow — The amount, in grams, of a thermoplastic resin which can be forced through a 0.0825-inch orifice when subjected to 2,160 grams force for ten (10) minutes at 230°C, per ASTM D1238.

Melt Fracture — An instability in the melt flow through a die, starting at the entry to the die. It leads to surface irregularities on the finished article like a regular helix or irregularly-spaced ripples.

Melt Index — The amount, in grams, of thermoplastic material which can be forced through a 0.0825-inch orifice when subjected to 2,160 grams force for ten (10) minutes at 190°C, per ASTM D1238.

Melt Strength — The strength of the plastic while in the molten state.

Melting Point — The temperature at which a solid substance begins to melt under standard conditions.

Meniscus — The free surface of a liquid in a bottle; for example, water in contact with air confined in a capillary tube. The meniscus may be convex (e.g.